A STUDY OF CONSUMER SATISFACTION TOWARDS NEUROMARKETING IN INDIA WITH SPECIAL REFERENCE TO KANO MODEL

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ABSTRACT

This paper presents consumer satisfaction towards neuromarketing. It is analyzed by using Kano model and discusses the potential benefits that can be achieved by applying this approach to skis the application of neuromarketing. Neuromarketing investigates important information that commonly consumer purchase decisions take place at a mental, emotional and instinctive level; those take place in the subconscious brain that is under the levels of controlled awareness. Due to this striking motive, the perception technologists of the market are extremely keen to study the techniques of successful handling of the subconscious brain actions. The major reason is to encourage the preferred response in person's satisfaction as intensely as possible. This article with the application of Kano Model examines the impact of application of neuroscience techniques on marketing practices as these communicate to the exercise of individual free will. This study centers to investigate the consumer satisfaction towards neuromarketing by Kano questionnaire; includes questions involving consumers' awareness, consent, and understanding to what may be viewed as foray of their privacy rights.

Key Words*:* Consumer Satisfaction, Kano's Model, Kano's Questionnaire, Neuroscience, Neuromarketing

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Introduction

The emerging application of neuroscience techniques in marketing by the name of neuromarketing, which conduct customer brain research in a managerial decision making, it has been observed that neuromarketing is gaining popularity in the academics and business world as well. Therefore, the aim of this paper is to measure the consumer perception towards neuromarketing tools. Although, available neuromarketing studies do not provide clear impression of neuromarketing influence on consumer perception while considering technical as well as ethical issues. The article uses the approach of Kano Model in order to do so.

As neuromarketing was emerged in 2002, its application is continuously increasing and it is becoming famous among companies, marketers and advertisers (Morin, 2011). Although the term neuromarketing has connected with medical industry and psychology, this paper will focus on the consumer perception towards neuromarketing in India particularly.

In current scenario, all the markets are congested by plentiful similar and yet a little different products, Neuromarketing emerged as a key discipline to regularly innovate and distinguish products, which meet customer needs positively (Leonard, & Rayport, 1997; Dapkevičius, & Melnikas, 2011). By reason of marketer first intention of meeting customer needs, there is a need to evaluate customer brain, involved in purchase decision making and this objective is performed by neuromarketing research techniques (Kenning & Plassmann, 2008; Huettel et al., 2009b). Consequently, neuromarketing techniques such as eye tracking, skin conductance, fMRI, EEG etc. are commonly getting increased concentration and provide better understanding about consumer's brain inside to marketers (Lieberman, 2007; Dimoka, Banker, Benbasat, Davis, Dennis, Gefen, & Weber, 2012; Calvert, & Brammer, 2012; Ariely & Berns, 2010; Venkatraman et al., 2012).

This paper will measure consumer perception towards neuromarketing in India with the help of Kano's model i.e, is based on the two-factor theory Herzberg and gave a helpful diagram to identify ranking of customer's satisfaction or dissatisfaction of a particular product or service (Tan and Shen, 2000; Kuo, 2004; Tontini, 2007). In fact, an offering of a marketer, a customer might have a variety of satisfaction or dissatisfaction on the basis their needs are fulfilled completely, met partially, or unserved (Martensen and Gronholdt, 2001). Kano proposes a

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dimension that goes from total satisfaction (also called Delight and Excitement) to total dissatisfaction (or Frustration).

Japanese researcher and consultant Noriaki Kano published a paper in 1984. This paper described about procedure that gives contribution in measuring customer's satisfaction towards product. Outcome of that research is commonly called as Kano Model. One can conclude about how customers feelings through a questionnaire, and that questionnaire is known as Kano questionnaire.
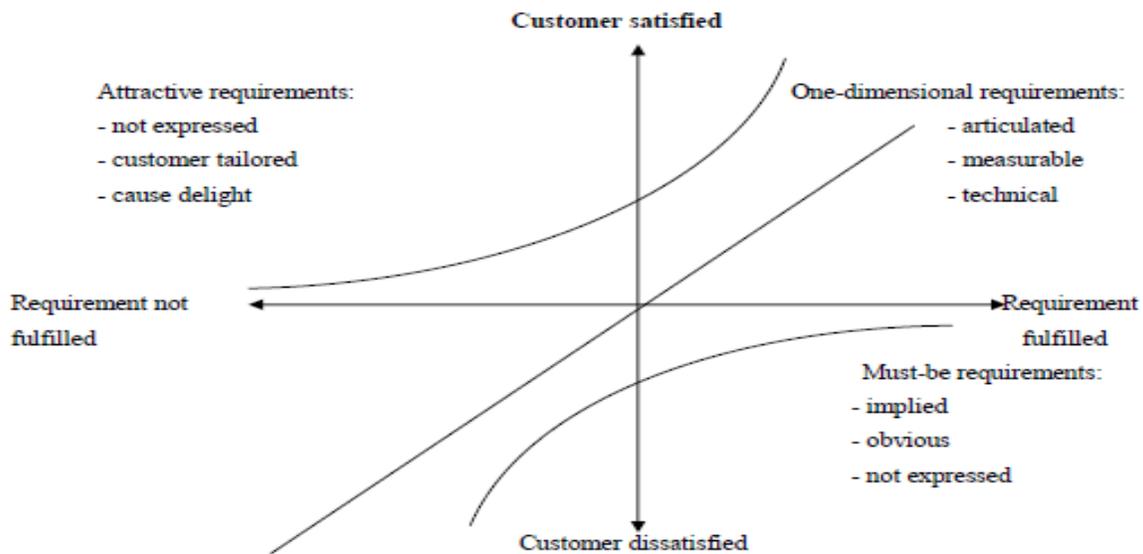
Customer satisfied

Attractive requirements:
- not expressed
- customer tailored
- cause delight

One-dimensional requirements:
- articulated
- measurable
- technical

Requirement not fulfilled

Requirement fulfilled

Must-be requirements:
- implied
- obvious
- not expressed

Customer dissatisfied

Figure1. Kano model of customer satisfaction (Sauerwein et al., 1996)

Literature Review

Now days marketers have adopted an integrative field as neuromarketing, that have been emerged for better understanding and characterizing the neural correlation behind consumer behavior and the processes underlying choice. These human behavioral theories have started to integrate conclusion from neuroscience to discriminate the neurological and physiological basics as well as the somatic factors that control consumer behavior. As such, neuromarketing evolved from the integration of marketing and neuroscience and projected an interdisciplinary approach to probing the neural correlates of consumer decision-making (Sanfey, Lowenstein, McClure & Cohen, 2006).

Neuromarketing is a discipline within neuroeconomics that look into marketing related decision-making and leverages insights arising from consumer's neurological data (Fugate, 2007).

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Neuromarketing focuses to examine consumer behavior through the application of neural processes and neuroscientific techniques sequentially to form a holistic concept of the neural basis of brand relationships and purchasing power. This emerging field has its scope to scientifically explain psychological position of customer that play a significant role in consumer buying decision and to provide a broad estimation of the effectiveness and influence of a range of marketing tactics for example advertising and product placement through focusing on how these tactics change an individual's neurobiology. Neuromarketing provides platform for investigation into the neural pathways and processes that pave consumer purchasing behaviors through neuroimaging and event-related potentials (ERP) (Javorm Koller, Lee, Chamberlain & Ransmayr, 2009).

Neuromarketing, as a discipline of marketing commercially introduced in 2002 by companies such as SalesBrain and Brighthouse. These companies started offering marketing and consulting services that were based in neuroscience techniques (Morin, 2013). In the first neuromarketing study, McClure used fMRI data to find the neural correlates of participant's preferences between Coke and Pepsi (Morin, 2013).

It has been observed by Morin in 2011 that neuromarketing has potential to investigate 4P's of marketing- product, price, promotion and place- and can contribute extensively to marketer's understanding about effectively marketing their products or services. An increasing number of marketing research papers, journals, schools, organizations and conferences utilize neuroscientific data to better understanding behind consumer buying decision-making and the ways by which that knowledge can be utilized to develop innovative marketing practices. Neuromarketing has offered lots of opportunities for companies to constantly determine implicit reactions to marketing stimuli, the field is still at an emerging stage.(Morin, 2011).

Martin Lindstorm's in his book "Buyology - Truth and Lies about Why We Buy" (2010) proposes that subconscious mind plays a key role in consumer's buying decisions. Neuromarketing is a field of marketing research, oriented towards Branding, Product design, Advertising, Customer decision making etc.

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Neuromarketing applies various techniques for measuring consumer behavior including Eye tracking (measuring eye gaze patterns, say, on a landing page), Analysing facial expressions, Behavioural experiments, Biometrics (body signal measures) that measure perspiration, respiration, heart rate, and facial muscle movement (electromyography [EMG]) and Neuromeric (brain signal measures) that measure electrical activity (electroencephalography [EEG]), and blood flow (functional magnetic resonance imaging [fMRI]) in the brain.

The Kano model focuses different product attributes. Traditionally for measuring customer satisfaction the relationship between the attributes and customer satisfaction was linearly observed. Kano model more specifically classifies the customer satisfaction between the performance of attributes and customer satisfaction as non-linear. It takes attributes as "mustbe", "one-dimensional" or "attractive" (Kano et al., 1984, Berger et al. 1993, Matzler et al. 1996, Nilson-Witell and Fundin 2005).

In 1984, Kano proposed the conceptual explanation of the Kano methodology, with the application of Kano questionnaire, a new research field was born and with this concept Kano presented his theory of "attractive quality and must-be quality" in the Western world. (Kano 1995, Yamada, 1998). Witell et. al., (2013) advised to use the traditional five-level Kano questionnaire.

To better understand the customer perception about an offering, group of functional and dysfunctional questionnaire design is applied. It aims to find out the customer perception towards offering of marketers (Lee et al., 2009).

A review of various researches proves the application of Kano's Model useful in measuring the Consumer perception. Kano's Model has been applied extensively within scholarly research (e.g., Bhattacharyya & Rahman, 2004; Emery & Tian, 2002; Emery & Tolbert, 2003; Liu,2008; Liu & Wu,2009; Schvaneveldt, Enhawa & Miyakawa, 1991; Fuller & Matzler, 2007; Schvaneveldt, Matzler & Hinterhuber, 1998; Yang, 2003 & 2005) and within a variety of contexts such as manufactured consumer products (Miyakawa & Wong, 1989), consumer services including banking, cleaning services, restaurants, and grocery stores (Schvaneveldt, 1991), website design, (Von Dran, Zhang & Small,1999), the retail ski product industry (Matzler

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& Hinterhuber, 1998), transportation (Silvestro & Johnson, 1990), as well as studies in employee satisfaction (Matzler, 2004) and student/professor satisfaction (Emery, 2006).

Objective of Research

> To ascertain customer satisfaction towards emerging integration of neuromarketing techniques with market research studies.

Methodology

This research measures consumer satisfaction towards neuromarketing in India through the implementation of a quantitative survey administered on emerging integration of neuromarketing techniques in market research studies in India. The survey instrument is based on the Kano Model questionnaire format. Participants in the study are qualified to participate as they are Academicians and 100 respondents were selected through random sampling from management colleges of U.P and M.P. in India.

Kano questionnaire

In order to uncover our customer's perceptions towards neuromarketing, this research uses the Kano questionnaire. It consists of a pair of questions for each feature researcher wants to evaluate:

1(A) Neuromarketing is an emerging branch of neuroscience where with the application of Biological techniques researchers can better understand the Buy-ology of customer, how do you feel?

■ I like it that way.

□ It must be that way.

□ I am neutral.

□ I can live with it that way.

□ I dislike it that way.

1 (B) Neuromarketing is an emerging branch of neuroscience where with the application of Biological techniques researchers can not better understand the Buy-ology of customer, how do you feel?

□ I like it that way.

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□ It must be that way.

■ I am neutral.

□ I can live with it that way.

□ I dislike it that way.

The first question is called the functional form and the second one is the dysfunctional form.

Researcher will do this through an evaluation table that combines the functional and dysfunctional answers in its rows and columns (respectively,). Each answer pair leads to one of those categories.

Customer requirements		Dysfunctional (negative) question				
		Like	Must-be	Neutral	Live with	Dislike
Functional (positive) question	Like	Q	A	A	A	O
	Must-be	R	I	I	I	M
	Neutral	R	I	I	I	M
	Live with	R	I	I	I	M
	Dislike	R	R	R	R	Q

A: Attractive   O: One-dimensional

M: Must-be   Q: Questionable

R: Reverse   I: Indifferent

Figure2. Kano Questionnaire Evaluation (Sauerwein et al., 1996)

Analysis and Interpretation

The questionnaire is analysed in three steps. After combined functional (positive) and dysfunctional (negative) question's answers (see Figure 2), the next step is the results analysis and interpretation. Below Table 1 is presented and it shows Consumer's Perception towards neuromarketing in India. The easiest way for the results interpretation is analysis, which is based on the response rate of recurrence.

Factors (Customer Requirements)	A	O	M	I	R	Q	Total	Category
Need of Market Research	32	41	1	21	2	3	100	O
Buy-Ology of Customer	42	16	3	35		4	100	A

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Application of Neuroscientific Techniques In Market Research	17	5	2	58	15	3	100	I
Study of Customer's Subconscious Mind	17	14	2	61	2	4	100	I
Need of Application of Neuromarketing In India	14	35	3	32	14	2	100	O
Influence of Neuromarketing On Customer Purchase Decisions	35	31	2	18	12	3	100	A
Efficacy of Marketing Activities With Neuromarketing	61	13	3	20	2	1	100	A
Neuromarketing; On The Basis Of Ethicality	8	7	3	10	60	12	100	R
Consumer Dissonance On Revealed Usage of Neuromarketing	12	5	13	56	8	6	100	I

Table 1. Consumer's response towards Neuromarketing (Kano Questionnaire Evaluation)

The customer satisfaction coefficient indicates how much the service or product features and properties may lead to customer satisfaction or vice versa – frustration/dissatisfaction. Summing up the average satisfaction with the impact, influence, it must be to add attractive, one-dimensional column and the divide by the total attractive, one-dimensional, must-be and indifferent responses. To calculate the average impact on dissatisfaction it should add the must-be and one-dimensional columns and then divide by the same factors.

$$\text{Extent of Satisfaction:} \quad \frac{A+O}{A+O+M+I}$$

$$\text{Extent of dissatisfaction:} \quad \frac{O+M}{(A+O+M+I)*(-1)}$$

In this case, the minus sign is placed in a formula to emphasize its negative impact on customer satisfaction if this expected quality is not fulfilled.

Satisfaction with the positive values included in the scope from 0 to 1. If the value is closer to 1, the impact of customer satisfaction is greater; positive coefficient, which approaches the value 0 indicates that there is very little impact, importance. However, it is important to see negative satisfaction values too. If the value is approaching towards -1, customer dissatisfaction is very

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strong; size, approximately equal to 0, meaning that a certain property does not feature such a high level of dissatisfaction.

Factors (Customer Requirements)	A	O	M	I	R	Q	Total	Category	$\dfrac{A+O}{A+O+M+I}$	$\dfrac{O+M}{(A+O+M+I)*(-1)}$
Need of Market Research	32	41	1	21	2	3	100	O	0.76	-0.45
Buy-Ology of Customer	42	16	3	35	-	4	100	A	0.60	-0.20
Application of Neuroscientific Techniques In Market Research	17	5	2	58	15	3	100	I	0.25	-0.085
Study of Customer's Subconscious Mind	17	14	2	61	2	4	100	I	0.33	-0.17
Need of Application of Neuromarketing In India	14	35	3	32	14	2	100	O	0.58	-0.45
Influence of Neuromarketing On Customer Purchase Decisions	35	31	2	18	12	3	100	A	0.78	-0.38
Efficacy of Marketing Activities With Neuromarketing	61	13	3	20	2	1	100	A	0.76	-0.16
Neuromarketing; On The Basis Of Ethicality	8	7	3	10	60	12	100	R	0.53	-0.35
Consumer Dissonance On Revealed Usage of Neuromarketing	12	5	13	56	8	6	100	I	0.19	-0.21

Table2. Customer Satisfaction towards Neuromarketing

CONCLUSIONS

This study proposes an integrated approach of Consumer Satisfaction Analysis with Kano's model questionnaire for identifying Indian Customer Satisfaction and this study concludes absence of marker research, Application of Neuromarketing In India, Influence of Neuromarketing On Customer Purchase Decisions and Ethicality   with respective negative

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customer satisfaction coefficient of -0.45,-0.45, -0.38 and -035 lead to slightly dissatisfaction; and absence of Study of customer buy-ology, Application of Neuroscientific Techniques In Market Research, Study of Customer's Subconscious Mind, Marketing Activities With Neuromarketing and Revealed Usage of Neuromarketing with respective negative customer satisfaction coefficient of -0.2, -0.085,-0.17,-0.16 and -0.21 lead as no reason for customer dissatisfaction.

On the other side presence of market research, study of Buy-Ology of Customer, Need of Application of Neuromarketing In India, Influence of Neuromarketing On Customer Purchase Decisions, Efficacy of Marketing Activities With Neuromarketing and Ethicality with respective positive customer satisfaction coefficient of 0.76, 0.60, 0.58, 0.78,0.76 and0.53 lead proportional high customer satisfaction while Application of Neuroscientific Techniques In Market Research, Study of Customer's Subconscious Mind and Dissonance On Revealed Usage of Neuromarketing with respective positive customer satisfaction coefficient of 0.25, 0.33 and 0.19 lead slightly low customer satisfaction.

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